

SEQUENCE LISTING

<110> BATHE, BRIGITTE  
MOCKEL, BETTINA  
PFEFFERLE, WALTER  
HUTHMACHER, KLAUS  
RUCKERT, CHRISTIAN  
KALINOWSKI, JORN  
PUHLER, ALFRED  
BINDER, MICHAEL  
GREISSINGER, DIETER  
THIERBACH, GEORG



<120> NUCLEOTIDE SEQUENCES WHICH CODE FOR THE METH GENE

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<140> 09/919,891

<141> 2001-08-02

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<151> 2001-02-28

<150> US 60/294,251

<151> 2001-05-31

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Gly Lys Asn Gly Ala Glu Tyr Pro Leu Glu Ala Glu Asp Leu Ala Gln  
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Ala Leu Ala Gly Phe Val Ser Glu Tyr Gly Leu Ser Met Val Gly Gly  
 290 295 300

Cys Cys Gly Thr Thr Pro Glu His Ile Arg Ala Val Arg Asp Ala Val  
 305 310 315 320

Val Gly Val Pro Glu Gln Glu Thr Ser Thr Leu Thr Lys Ile Pro Ala  
 325 330 335

Gly Pro Val Glu Gln Ala Ser Arg Glu Val Glu Lys Glu Asp Ser Val  
 340 345 350

Ala Ser Leu Tyr Thr Ser Val Pro Leu Ser Gln Glu Thr Gly Ile Ser  
 355 360 365

Met Ile Gly Glu Arg Thr Asn Ser Asn Gly Ser Lys Ala Phe Arg Glu  
 370 375 380

Ala Met Leu Ser Gly Asp Trp Glu Lys Cys Val Asp Ile Ala Lys Gln  
 385 390 395 400

Gln Thr Arg Asp Gly Ala His Met Leu Asp Leu Cys Val Asp Tyr Val  
 405 410 415

Gly Arg Asp Gly Thr Ala Asp Met Ala Thr Leu Ala Ala Leu Leu Ala  
 420 425 430

Thr Ser Ser Thr Leu Pro Ile Met Ile Asp Ser Thr Glu Pro Glu Val  
 435 440 445

Ile Arg Thr Gly Leu Glu His Leu Gly Gly Arg Ser Ile Val Asn Ser  
 450 455 460

Val Asn Phe Glu Asp Gly Asp Gly Pro Glu Ser Arg Tyr Gln Arg Ile  
 465 470 475 480

Met Lys Leu Val Lys Gln His Gly Ala Ala Val Val Ala Leu Thr Ile  
 485 490 495

Asp Glu Glu Gly Gln Ala Arg Thr Ala Glu His Lys Val Arg Ile Ala  
 500 505 510

Lys Arg Leu Ile Asp Asp Ile Thr Gly Ser Tyr Gly Leu Asp Ile Lys  
 515 520 525

Asp Ile Val Val Asp Cys Leu Thr Phe Pro Ile Ser Thr Gly Gln Glu  
 530 535 540

Glu Thr Arg Arg Asp Gly Ile Glu Thr Ile Glu Ala Ile Arg Glu Leu  
 545 550 555 560

Lys Lys Leu Tyr Pro Glu Ile His Thr Thr Leu Gly Leu Ser Asn Ile  
 565 570 575

Ser Phe Gly Leu Asn Pro Ala Ala Arg Gln Val Leu Asn Ser Val Phe  
 580 585 590

Leu Asn Glu Cys Ile Glu Ala Gly Leu Asp Ser Ala Ile Ala His Ser  
 595 600 605

Ser Lys Ile Leu Pro Met Asn Arg Ile Asp Asp Arg Gln Arg Glu Val  
 610 615 620

Ala Leu Asp Met Val Tyr Asp Arg Arg Thr Glu Asp Tyr Asp Pro Leu  
 625 630 635 640

Gln Glu Phe Met Gln Leu Phe Glu Gly Val Ser Ala Ala Asp Ala Lys  
 645 650 655

Asp Ala Arg Ala Glu Gln Leu Ala Ala Met Pro Leu Phe Glu Arg Leu  
 660 665 670

Ala Gln Arg Ile Ile Asp Gly Asp Lys Asn Gly Leu Glu Asp Asp Leu  
 675 680 685

Glu Ala Gly Met Lys Glu Lys Ser Pro Ile Ala Ile Ile Asn Glu Asp  
 690 695 700

Leu Leu Asn Gly Met Lys Thr Val Gly Glu Leu Phe Gly Ser Gly Gln  
 705 710 715 720

Met Gln Leu Pro Phe Val Leu Gln Ser Ala Glu Thr Met Lys Thr Ala  
 725 730 735

Val Ala Tyr Leu Glu Pro Phe Met Glu Glu Glu Ala Glu Ala Thr Gly  
 740 745 750

Ser Ala Gln Ala Glu Gly Lys Gly Lys Ile Val Val Ala Thr Val Lys  
 755 760 765

Gly Asp Val His Asp Ile Gly Lys Asn Leu Val Asp Ile Ile Leu Ser  
 770 775 780

Asn	Asn	Gly	Tyr	Asp	Val	Val	Asn	Leu	Gly	Ile	Lys	Gln	Pro	Leu	Ser	785	790	795	800
Ala	Met	Leu	Glu	Ala	Ala	Glu	Glu	His	Lys	Ala	Asp	Val	Ile	Gly	Met	805	810	815	
Ser	Gly	Leu	Leu	Val	Lys	Ser	Thr	Val	Val	Met	Lys	Glu	Asn	Leu	Glu	820	825	830	
Glu	Met	Asn	Asn	Ala	Gly	Ala	Ser	Asn	Tyr	Pro	Val	Ile	Leu	Gly	Gly	835	840	845	
Ala	Ala	Leu	Thr	Arg	Thr	Tyr	Val	Glu	Asn	Asp	Leu	Asn	Glu	Val	Tyr	850	855	860	
Thr	Gly	Glu	Val	Tyr	Tyr	Ala	Arg	Asp	Ala	Phe	Glu	Gly	Leu	Arg	Leu	865	870	875	880
Met	Asp	Glu	Val	Met	Ala	Glu	Lys	Arg	Gly	Glu	Gly	Leu	Asp	Pro	Asn	885	890	895	
Ser	Pro	Glu	Ala	Ile	Glu	Gln	Ala	Lys	Lys	Lys	Ala	Glu	Arg	Lys	Ala	900	905	910	
Arg	Asn	Glu	Arg	Ser	Arg	Lys	Ile	Ala	Ala	Glu	Arg	Lys	Ala	Asn	Ala	915	920	925	
Ala	Pro	Val	Ile	Val	Pro	Glu	Arg	Ser	Asp	Val	Ser	Thr	Asp	Thr	Pro	930	935	940	
Thr	Ala	Ala	Pro	Pro	Phe	Trp	Gly	Thr	Arg	Ile	Val	Lys	Gly	Leu	Pro	945	950	955	960
Leu	Ala	Glu	Phe	Leu	Gly	Asn	Leu	Asp	Glu	Arg	Ala	Leu	Phe	Met	Gly	965	970	975	
Gln	Trp	Gly	Leu	Lys	Ser	Thr	Arg	Gly	Asn	Glu	Gly	Pro	Ser	Tyr	Glu	980	985	990	

Asp Leu Val Glu Thr Glu Gly Arg Pro Arg Leu Arg Tyr Trp Leu Asp  
 995 1000 1005

Arg Leu Lys Ser Glu Gly Ile Leu Asp His Val Ala Leu Val Tyr  
 1010 1015 1020

Gly Tyr Phe Pro Ala Val Ala Glu Gly Asp Asp Val Val Ile Leu  
 1025 1030 1035

Glu Ser Pro Asp Pro His Ala Ala Glu Arg Met Arg Phe Ser Phe  
 1040 1045 1050

Pro Arg Gln Gln Arg Gly Arg Phe Leu Cys Ile Ala Asp Phe Ile  
 1055 1060 1065

Arg Pro Arg Glu Gln Ala Val Lys Asp Gly Gln Val Asp Val Met  
 1070 1075 1080

Pro Phe Gln Leu Val Thr Met Gly Asn Pro Ile Ala Asp Phe Ala  
 1085 1090 1095

Asn Glu Leu Phe Ala Ala Asn Glu Tyr Arg Glu Tyr Leu Glu Val  
 1100 1105 1110

His Gly Ile Gly Val Gln Leu Thr Glu Ala Leu Ala Glu Tyr Trp  
 1115 1120 1125

His Ser Arg Val Arg Ser Glu Leu Lys Leu Asn Asp Gly Gly Ser  
 1130 1135 1140

Val Ala Asp Phe Asp Pro Glu Asp Lys Thr Lys Phe Phe Asp Leu  
 1145 1150 1155

Asp Tyr Arg Gly Ala Arg Phe Ser Phe Gly Tyr Gly Ser Cys Pro  
 1160 1165 1170

Asp Leu Glu Asp Arg Ala Lys Leu Val Glu Leu Leu Glu Pro Gly  
 1175 1180 1185

Arg Ile Gly Val Glu Leu Ser Glu Glu Leu Gln Leu His Pro Glu  
 1190 1195 1200

Gln Ser Thr Asp Ala Phe Val Leu Tyr His Pro Glu Ala Lys Tyr  
 1205 1210 1215

Phe Asn Val  
 1220

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<213> Artificial sequence

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52

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<213> Artificial sequence

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32